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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,795

10/12/2007

Linda Jane McCausland

McCAUSLAND-15819

4648

25628 7590 03/10/2009
LAW OFFICES OF WILLIAM H. HOLT
12311 HARBOR DRIVE
WOODBIDGE, VA 22192

EXAMINER

LEE, REBECCA Y

ART UNIT

PAPER NUMBER

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,795	Applicant(s) MCCAUSLAND ET AL.	
	Examiner REBECCA LEE	Art Unit 4181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/06/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-8, drawn to a method for removing sodium oxalate from a Bayer liquor.

Group II, claim(s) 9-12, drawn to a Bayer liquor treatment apparatus.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: claim 1 is anticipated or obvious over, e.g., US 6743403 to Rosenberg et al. (see abstract). As the recited process does not make a contribution over the prior art, unity of invention is lacking and restriction is appropriate.

During a telephone conversation with William Hot on February 9th, 2009 a provisional election was made with traverse to prosecute the invention of group I, claims 1-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-12 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 4 recites the limitation "the vessel". There is insufficient antecedent basis for this limitation in the claim. In light of the specification, the term "vessel" should be changed to "duct".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 4181

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg et al. (US6743403) in view of McCausland et al. (WO03101578).

Regarding claim 1, Rosenberg et al. discloses a method for removing sodium oxalate from Bayer liquor by supersaturating a side stream, i.e., a stream of the liquor has been removed, then carrying out solid/liquid separation (removing the resultant crystals) (Column 2, lines 29-40).

Rosenberg et al. does not specifically teach the supersaturated solution is subjected to ultrasonic irradiation.

McCausland et al. teaches crystalline material would be produced by using ultrasound (Title).

It would have been obvious to one of ordinary skill in the art to modify the process taught by Rosenberg et al. by applying the ultrasonic irradiation to the saturated solution since McCausland et al. teaches ultrasonic irradiation aids the forming of crystalline materials (Page 2, lines 5-12). One would have been motivated to crystallize out sodium oxalate and promote the removal of sodium oxalate.

Regarding claims 2-5, McCausland et al. teaches the stream of supersaturated liquor is caused to flow through a duct with continuously ultrasonic irradiation for a time no more than 30 seconds (Page 2, lines 25-30, Page 8, lines 27-35) in an identical irradiation vessel (duct) as claimed (Page 3, lines 16-25) with an internal diameter (width) of 0.31 m (Page 4, lines 20-22).

Regarding claim 6, Rosenberg et al. discloses the Bayer liquor is supersaturated by evaporation (Column 2, lines 29-40).

Regarding claim 7, Rosenberg et al. teaches a portion of the solid sodium oxalate is recycled to act as seed (Column 2, lines 29-40). It would have been obvious to one of ordinary skill in the art to contact the crystals resulting from ultrasonic irradiation with the supersaturated liquor, to act as seed as taught by Rosenberg et al., to grow the crystal before removing the resultant crystal in order to further remove sodium oxalate.

Regarding claim 8, Rosenberg et al. discloses the supersaturated stream contains sodium oxalate crystals (Column 2, lines 29-40), and McCausland et al. teaches ultrasonic irradiation would cause more crystal growth in the supersaturated solution (Page 2, lines 5-12).

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REBECCA LEE whose telephone number is (571)270-5856. The examiner can normally be reached on Monday-Friday 8:00 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROY KING can be reached on 5712721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4181

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./
Examiner, Art Unit 1793

/John P. Sheehan/
Primary Examiner, Art Unit 1793